

ST. PETER'S, ROME.

THE SIXTH ROYAL ACADEMY LECTURE, SESSION 1901.*

By Professor AITCHISON, R.A., *Past President, Royal Gold Medallist.*

AFTER having heard so much of the size and grandeur of the outside of St. Peter's I was very much disappointed when I first saw it during the Holy Week of 1853. I attribute much of its want of effect to the Cavaliere Bernino, who—with the chance of making an enclosure like the temenos of a Greek temple, which was to confine the views of the temple to certain favourable points, and to make the temenos low and comparatively insignificant, to contrast with and enhance the size and grandeur of the temple, as Michelangelo and Bramante proposed to do—seems to have thought that his duty was to make as much of his own work as possible, regardless of its dwarfing St. Peter's.

Bernino's colonnades that surround the square in front of St. Peter's are more than a third of the height of the whole building up to the parapet of the attic, and the ends abut on its front; so what with the enormous area they enclose and the immense height of the colonnades themselves, St. Peter's looks in size like an ordinary church, and though the colonnade is probably a correct example of Doric without triglyphs, it has no charm. As to the front of St. Peter's itself, unless there is a man standing at the base of one of the columns, you cannot imagine that the bases are nearly 6 feet 7 inches high from the pavement at the top of the steps to the top of the fillets of the apophyges. The columns are Corinthian, and are 8 feet 9 inches at their lower diameter, and rather more than ten diameters high. The front itself is a very poor production. It consists of a tetrastyle Corinthian portico with a wider space between the middle columns, an entablature, and a pediment. Beyond this on each side are two additional columns; the bays beyond these are flanked by a Corinthian pilaster of considerable projection, with an archway at both ends bounded by a shallow pilaster. The front has the look of a deserted temple of rather large proportions, which has had the spaces between the columns built up to make a palace or dwelling-house; and the upper balconied windows beneath the entablature add considerably to the effect of its being a dwelling-house with an attic above the entablature for the servants. A balcony or balconies were wanted, it is true, for the Pope's benediction, but these might have been made characteristic features. The wall behind the columns and pilasters has in the portico a middle square-headed opening or doorway with Ionic columns supporting an

* Lectures III. and IV. appeared in the JOURNAL, Vol. VIII., and Lecture V. in the last number. Third Series, Vol. IX., No. 4.—21 Dec. 1901.

entablature, with round-headed doors between the last two columns of the portico; beyond these are two square-headed openings with Ionic columns and empty niches with dressings and segmental pediment, and the last bay at each end has an archway whose key-stone runs up to the soffit of the balcony. The upper windows have alternately triangular and segmental pediments, and there are panels between the soffit of the balconies and the door heads below; some of these panels are open and some sculptured. The attic has pilasters over the columns below, with Ionic capitals and cherubs' heads beneath them; the windows are small square windows with kneed architraves. The two beyond the pediment have triangular pediments with shells, and the openings below the clocks are square-headed, and have the bells and framing. The clock cases have emblems of the Papacy to crown them, and sprawling figures at the sides. A balustrade crowns the attic, and on the pedestals are thirteen figures, said to be Jesus Christ and the twelve Apostles, 18 feet 6 inches high.

From the plan of St. Peter's being changed from a Greek to a Latin cross the drum is lost, and the dome very much shortened from a near front view, so that the whole is made a much less imposing feature by the perspective of the lengthened nave. Looking at the front of St. Peter's, Bernino's grand staircase is on the right, and leads up to the Vatican. On the left there is a large court with a high wall to the left, which enables you to get a fair sight of the flank of St. Peter's [p. 81]; and this flank, which has no columns but only pilasters, has in parts considerable dignity, for in this restricted space the immense size of St. Peter's is conspicuous. The whole might be looked on as a rather imposing palace, but by no means of the highest class of architecture, for where there are staircase windows in the narrow intercolumniations, this feature has been repeated by superimposed empty niches. The attic windows on the flank have the pediments left out, with the scollop shell in the middle of the cymatium, and deep square fluted trusses with guttie to support the cymatium; the pilasters have plain moulded caps, and in the narrow intercolumniation of the attic are niches with dressings crowned with the Pope's tiara; the niche contains a candelabrum and the head is fluted. The putting pediments over the windows below immediately under a projecting entablature is not a very rational proceeding, and when the tops of them are jammed up against the soffit of the entablature it does not make a happy composition, nor are the proportions charming nor the details exquisite. The architectural features do not tell of the lighting of a vast hall like the Gothic west windows do. The Renaissance architects had very little invention, and did not know what to do with an enormous window; when they wanted a great window they had nothing but the old Roman plan of a semicircular one with two mullions like those at Diocletian's baths, which is as ugly a feature as I know. I think we are learning how to make vast windows without falling back on Gothic geometry. The refined taste of the Renaissance architects made them shudder at Gothic—more than we do now at its imitation. Nor do the upper side windows explain the lighting of the aisles, although the windows are vast (some of them on the first floor are 19 feet 8 inches high and about 9 feet 10 inches wide). The architects of St. Peter's met the difficulty of lighting the aisles by top-lighting.

On the ground floor of both front and flank there are no windows, but niches having dressings, with pediments alternately segmental and triangular, with deep square trusses to the architraves, these trusses being utterly disproportionate to the weight they have to carry, and the ordinary ogce trusses beneath the thin sills, and the niches are empty. An empty niche is perhaps the poorest expedient an architect has ever invented. The upper windows have balconies which are flanked with pedestals, on which stand Roman Ionic columns with segmental and triangular pediments alternating; and the windows themselves are alternately square and circular headed, and there is a shallow panel between the bottom of the balcony and the top of the pediment beneath.

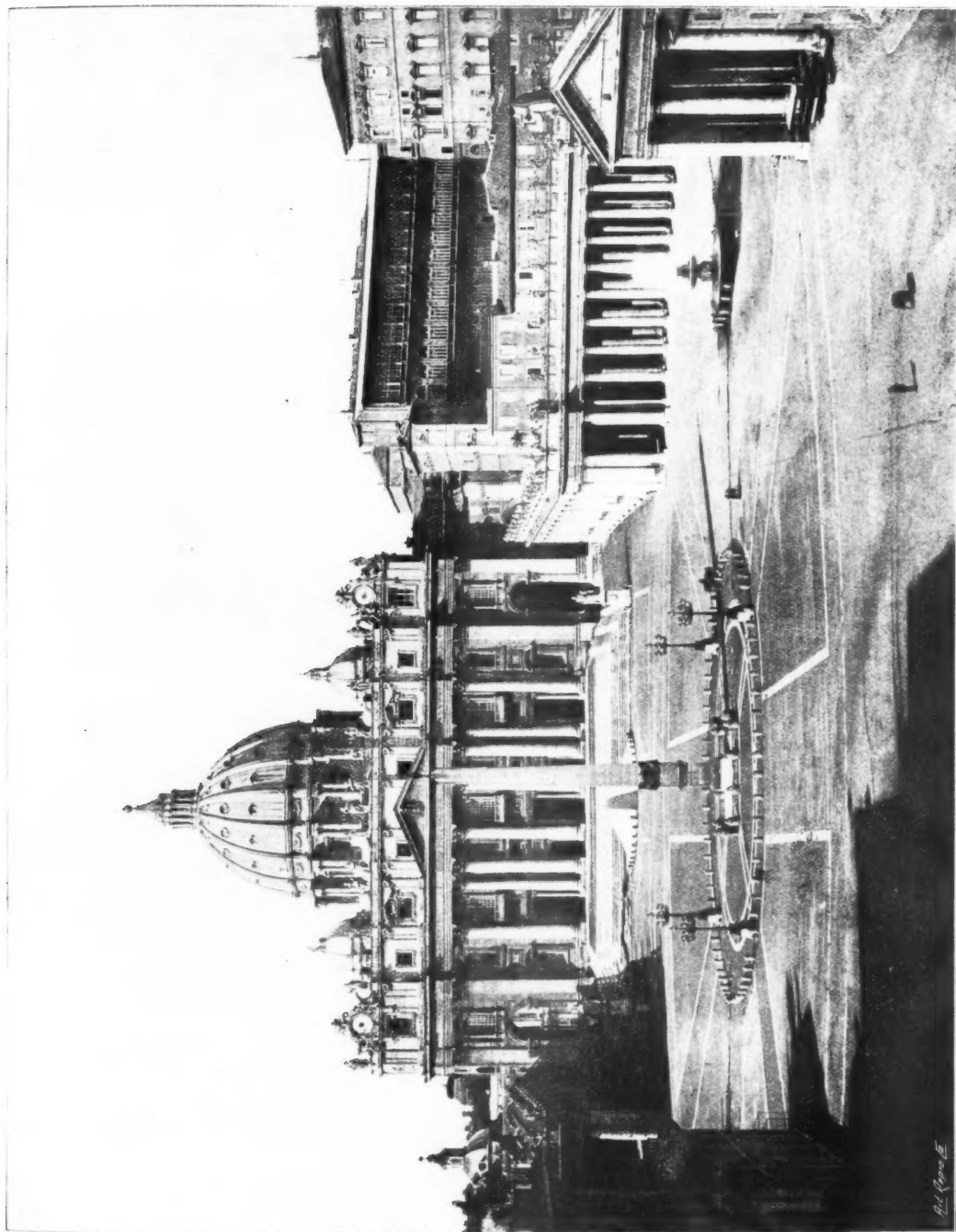


FIG. 1.—ST. PETER'S, THE COLONNADE, AND THE VATICAN, ROME.

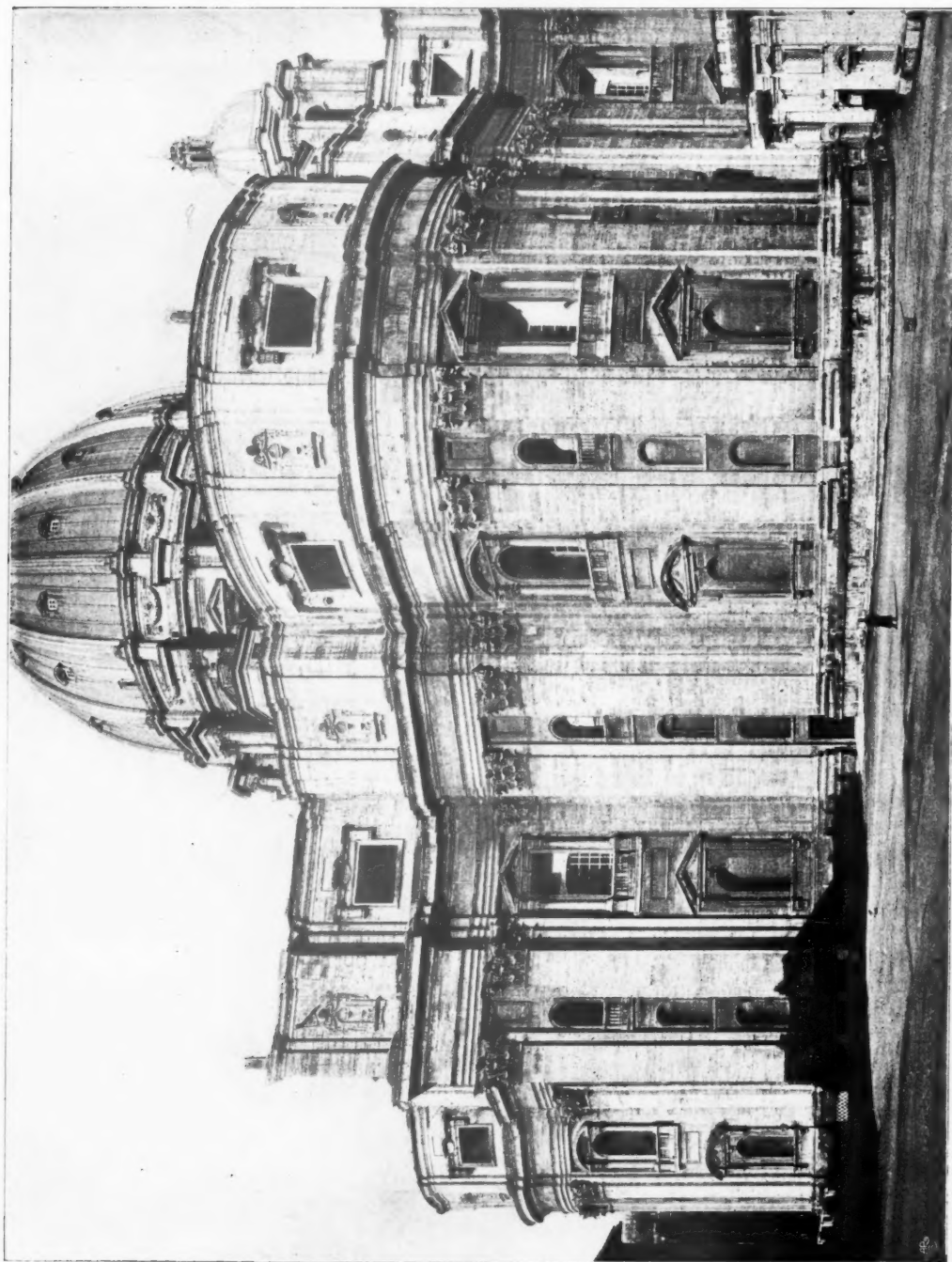


FIG. 2.—AISE OF TRANSEPT, ST. PETER'S, ROME.

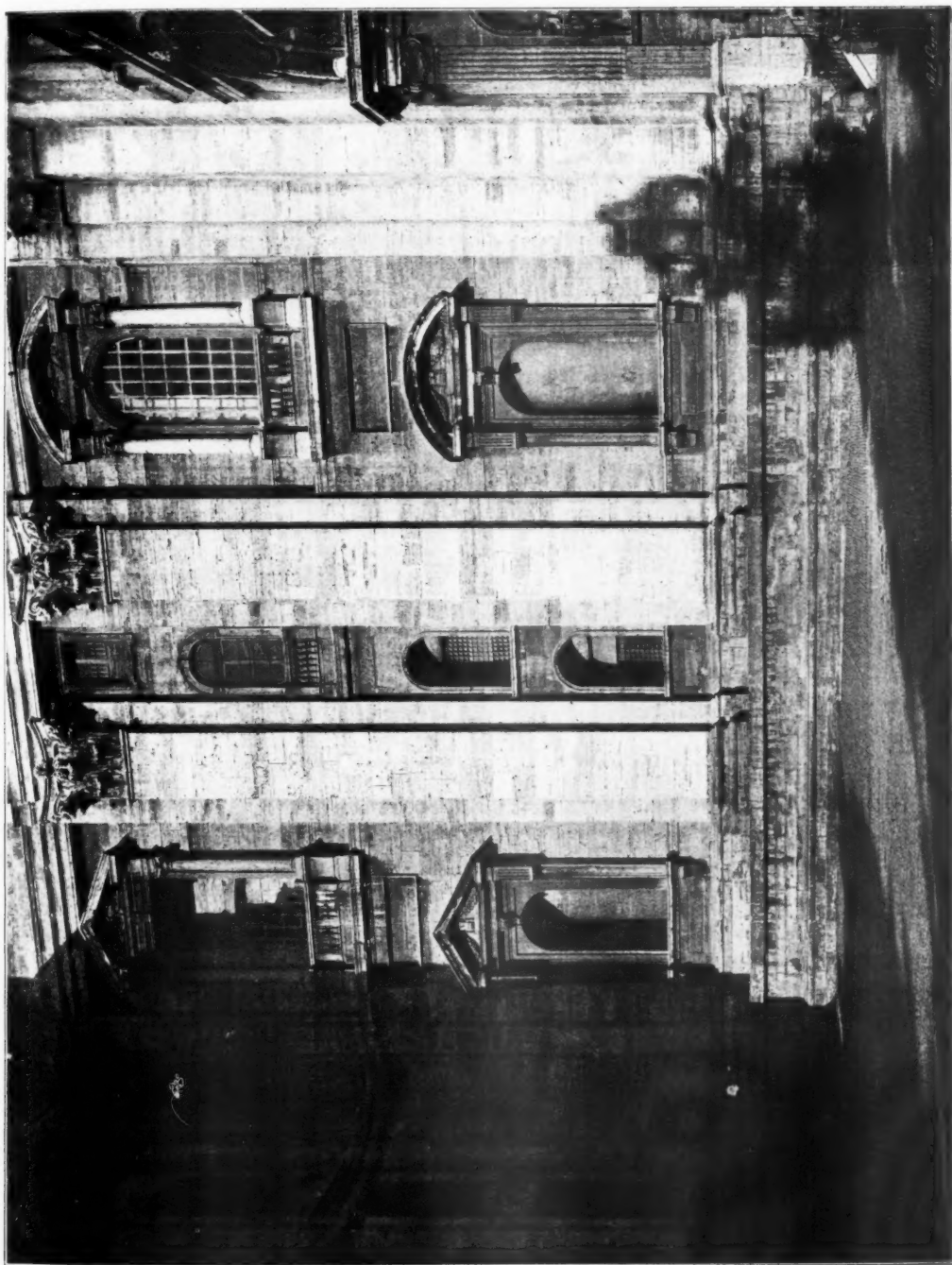


FIG. 3. FLANK OF ST. PETER'S, ROME.

Since Byzantine times domes have become the sign of a cathedral or of an important church; but the misfortune of using a dome that makes an effective crowning feature to the edifice is that you have to sacrifice the inside, for from the entrance the dome shows itself merely as a hole in the vault until you are nearly under it. The great advantage of the Pantheon is that you are in a circular building which the dome covers, lit only from the top, so that you must needs look up. At Santa Sophia at Constantinople, though you see the central dome from the entrance doorway, the dome makes no prominent feature outside. Externally the Pantheon is almost in the same plight as Santa Sophia, as the steps at the foot of the cupola, to abut its thrust, make it look depressed.

On entering the Basilica you find that everything has been carried out on so gigantic a scale that what is really immense looks no larger than the parts of an ordinary church. The cherubs that support the holy water stoups are, as far as my recollection carries me, 9 feet 6 inches long from the ends of the fingers that support the stoup to the toes, and the Corinthian pilasters are about 8 feet 9½ inches wide.

Antonio da San Gallo the Younger is said to have made the level of the paving about 10 feet higher than was originally intended. I suppose he was doubtful of the stability of some parts. We see in one of Martin Heemskirk's sketches the base of some of the nave pilasters with a capping and part of the dado beneath them. The present pilasters stand on the pavement.

There is, of course, on a fine day a bright part under the dome, but you see nothing of the dome itself from the entrance, but only the huge brazen baldacchino with the high altar beneath it, and at the end the Pope's chair in the apse. As the baldacchino makes a dark central mass, it has, with the vista beyond it, a fine effect.

The nave between the pilasters at St. Peter's is about 83 feet wide and only about 145 feet high to the soffit of the vault, or less than double the width, while the aisles are but 34 feet wide, and the height up to the eyes of the oval domes is 127 feet, or nearly four times the width, and consequently the aisles look loftier than the nave, but the effect of the aisles is spoiled by the vista being cut off by the piers of the dome. I think the best view of the dome is from the transept, for there you look over Bernino's baldacchino, which is but a large piece of bad upholstery executed in bronze, for which the brazen coverings of the girders and the bronze and silver vault of the portico of the Pantheon were sacrificed. The whole of the interior decoration of St. Peter's is commonplace and inclined to be tawdry, although made of rare and costly marbles and fine stones; two or three pieces of inlay before you come to the Gregorian Chapel are rather pleasant to look at. White, when used in full coloured decoration, should be used like jewels, sparingly; but here the use of it is lavish, and gives a commonplace air to the decoration. As far as proportion goes, I think the narthex is the most successful piece of the whole structure. When I last visited St. Peter's, in 1898, I thought the only piece of art in it was the bronze monument to Innocent VIII. by Pollaiuolo [p. 85].

Innocent VIII. began his reign in 1484 and died in 1492, so this monument had some traces of the devotional manner of the Gothic times, only better drawn and more graceful by the advent of the Renaissance. The sepulchral monuments of the fifteenth century with which the great Italian churches and cathedrals are dotted have that peculiar felicity and grace which seem to have evaporated by the middle of the next century. Some of the tombs by Donatello and Jacopo della Quercia, and all I have seen by the two Rossellini, Desiderio da Settignano, Matteo Civitale, and Mino da Fiesole, are some of the sweetest things in the world. One of these monuments, to Ugo Marquis of Tuscany, in the Abbey at Florence, has two naked little boys who are holding up the shields of the dead man: the boys have



FIG. 4.

that delightful look of unconscious purity and grace that is so marked a characteristic of healthy, unspoiled children, while the great slabs of porphyry above the recumbent figure give the appropriate solemnity of colour to the sepulchral monument.

Pollaiuolo (Il Cronaca) was born in 1457 and died in 1508. These men of the fifteenth century who felt the full force of the new intellectual freedom, and had the passionate enthusiasm for it and for the benefits that would ensue, very rapidly died out and gave place to men whose whole idea was to give a comparatively dull imitation of Roman work; and by the end of the next century a moulding or a proportion that was different from the antique was looked on as a much greater fault than a want of originality or want of charm. These men of the fifteenth century always put me in mind of one of the old songs which says:—

I've been roaming! I've been roaming!
Where the honeysuckle creeps,
And like a bee I'm coming
With its kisses on my lips.

The charm of their work is like the delicious scent of hay or of wild flowers, but this charm had evaporated from the works of those who were born in the sixteenth century. Even Palladio, who was born in 1518, and who got some of the grand style of the ancients, mostly wanted that native charm which is so conspicuous in the best masters of the fifteenth century.

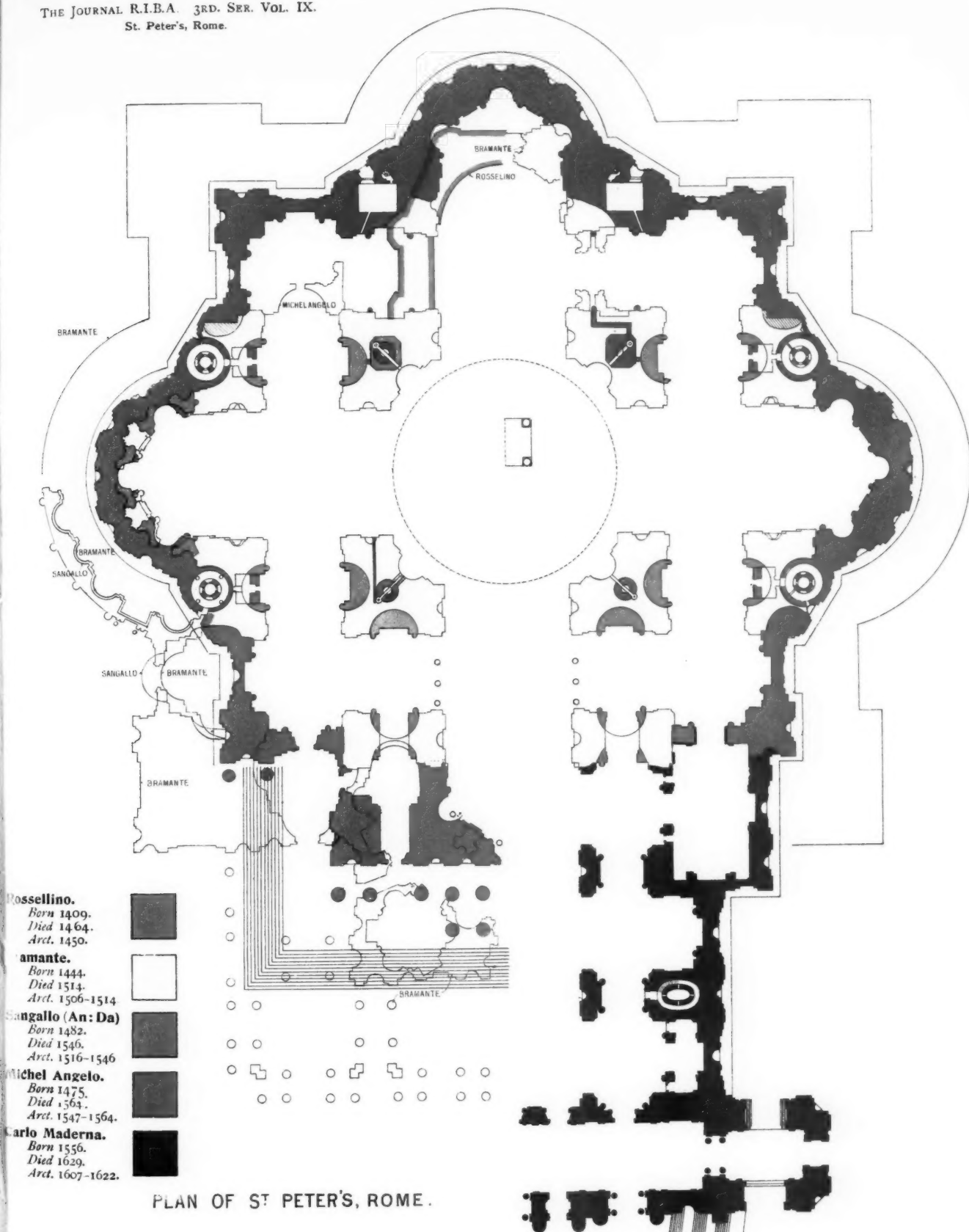
St. Peter's is full of precious marbles, fine stones, silver and bronze, although the pilasters of the nave are only of painted plaster, but almost all the figure subjects there lack the charm of the earlier sculpture and statuary. There are some excellent statues and bas-reliefs in St. Peter's, but there is an entire absence of any religious or devotional expression about them; even about the children there is a want of that spontaneous and unconscious grace which so characterises the work of the early sculptors. There are a few handsome women as accessories to some of the tombs, but they all have a worldly look, and many of the later ones even have that half-flabby look which is the natural consequence of neglect of health.

The whole impression that the cathedral leaves on us is opposed to the idea of its being a place of worship, and gives us the idea of a mausoleum to persons of rank and power. The splendid panegyric Lord Byron wrote on St. Peter's in his *Childe Harold* has done much to create an admiration for it; but of that I am not going to speak. But I will say something about his defence of its apparent want of size when it was really so colossal:

Enter: its grandeur overwhelms thee not;
And why? it is not lessen'd; but thy mind.
Expanded by the genius of the spot,
Has grown colossal.

This is a beautiful poetic reason, but it is not the real one; it was purely want of architectural knowledge and skill. To gauge the size of anything you want a scale, and Nature has supplied that scale by man; and if you supply a colossal scale to measure by, as is done at St. Peter's by the gigantic cherubim, you falsify the scale, and thus waste thousands of tons of stone to produce an inadequate effect. Colossal size is undoubtedly both striking and impressive if you arrange it so as to be appreciated. The mediæval architects were quite aware of this, and took the ordinary proportions of man as their scale; the plinths of piers were mostly only high enough for seats, and the spaces between the mullions were only the width of a man's shoulders, while the heights of naves were made apparent by their narrowness.

The very piers of the dome at St. Peter's tend to dwarf the dome by their colossal size. They may be described as two piers at right angles to one another, whose length is 61 feet



BY PERMISSION OF BARON HENRY DE GEYMULLER.
FROM HIS "PROJETS PRIMITIFS"

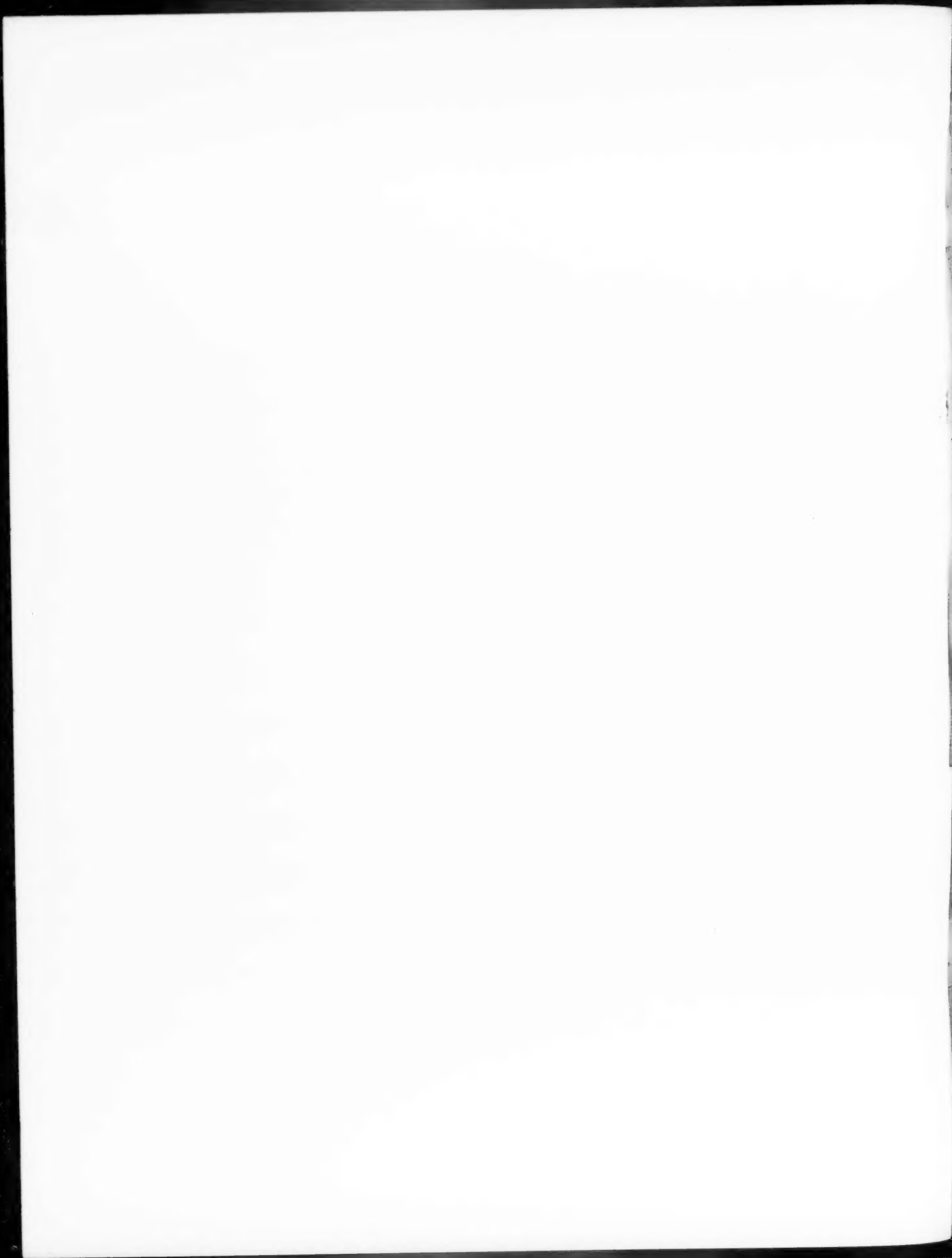
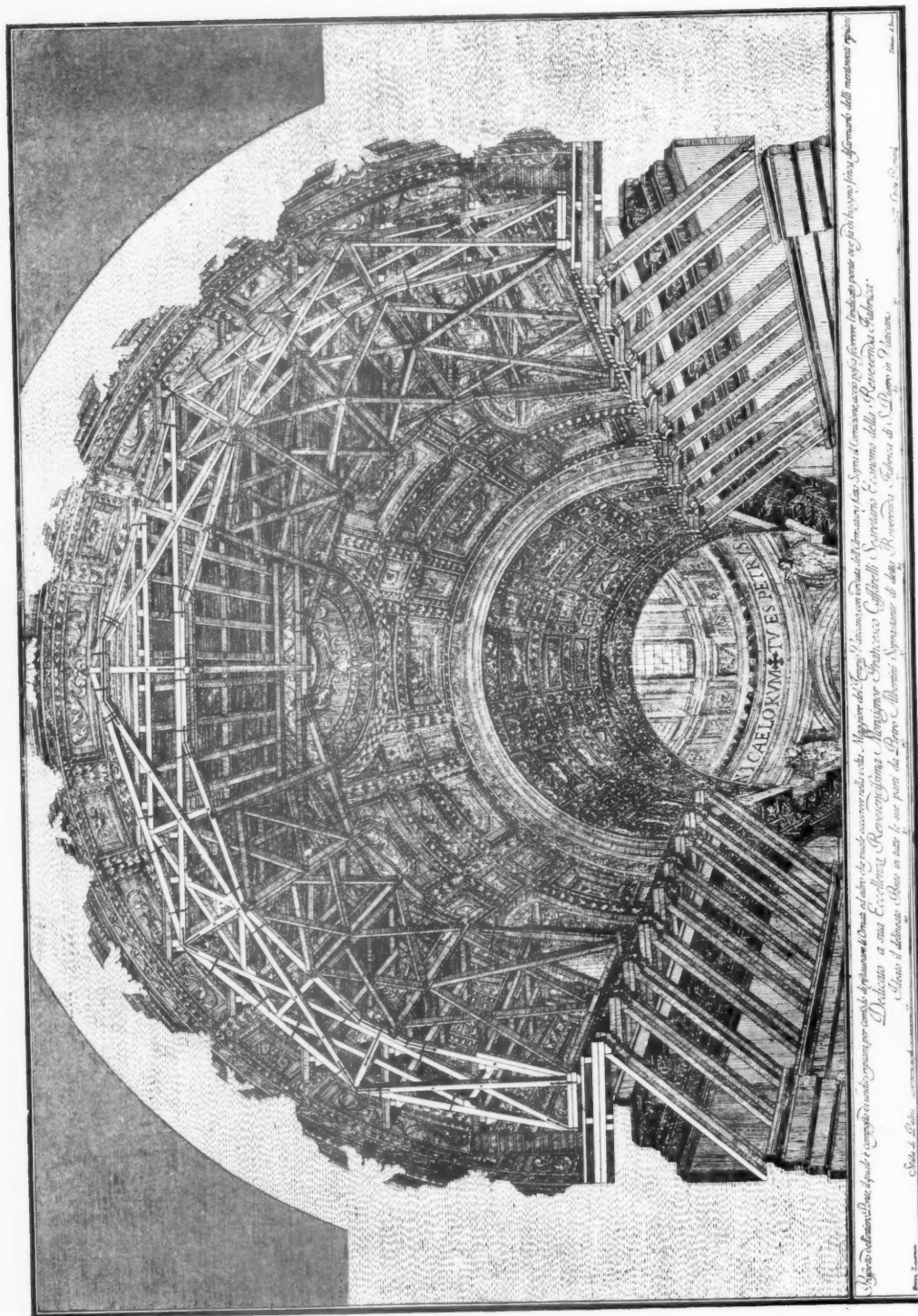




FIG. 5.—TOMB OF INNOCENT VIII. IN ST. PETER'S, ROME, SAID TO BE BY IL CRONACA.





*Prospetto interno del Tempio Vaticano, con veduta del Ponte nella maniera in cui fu inalzato sul Cornicione del medesimo Tempio, con sei
 Argani destinati per il tiro del suddetto Ponte, seguito il giorno 26. Novembre dell' Anno 1773.
 Dedicato à Sua Eccellenza Reverendissima Monsignor Francesco Caffarelli Segretario Economico della Reverenda Fabbrica
 Invenuto il detto Ponte da Pietro Albertini Soprintendente della Reverenda Fabbrica di S. Pietro in Vaticano*

Scala di Piedi Conto Romani per la Proporzione del Ponte, e sito nel sotto maggiore dove si dimostra il tiro del medesimo nella lettera A. B.

FIG. 7.

and whose width is 39 feet, with a niche 16 feet 4 inches in diameter in the right angle next the dome. Each pier has a perimeter 285 feet, and an area 2,256 feet, which ought to bear at least a weight of 6,768 tons.

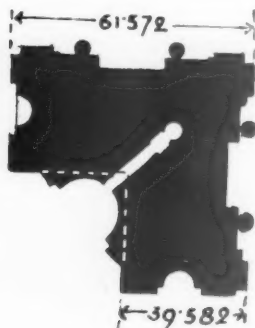


FIG. 8.

That part of the vault of the nave that extends from the dome as far as Michelangelo intended his church to go is to the soffit of the rib about 10 feet thick, while that over Carlo Maderno's part is about 3 feet 3 inches. Who vaulted the thick part I do not know, whether Michelangelo, Giacomo della Porta, or Vignola, or whether it was made so thick from antique examples, though thicker than most of the Roman vaults, or to be a stay to the dome; but as it makes a break in the vault, Carlo Maderno's vault being level with its top, attention is drawn to the fact. But, as I have not attempted to go into the statical problems of the building, it is too late to begin now, and I will merely make a few remarks on its effect. The whole vault is

coffered, and both the ribs and panels are enriched with ornamental plastering which has rather the air of being cast. At any rate, it has none of the artistic power of the hand-worked Roman plastering as you see it in some of the streets at Pompeii and in the tombs on the Appian Way, nor as you once saw it at Hadrian's villa at Tivoli; and as the plain parts of the vault are painted white and the ornamental part gilt, it is frightfully monotonous. It was being cleaned or repainted when I was there in 1898, and the flying scaffold was in use. Mr. Walter Severn was amiable enough to present me with two old engravings of the flying scaffold [pp. 86. 87].

The use of the mosaic copies of Rafael's celebrated pictures is to be commended as likely in case of a fire at least partially to preserve the design, but the colours are so execrably imitated that their want of harmony almost makes one shudder. I presume that the quantity and costliness of the work satisfy the ordinary worshipper, for when I was there in 1853 I went to one of the celebrations when the Pope is carried round the Cathedral, and the Cathedral was crowded with worshippers, most of them peasants, who even then had nearly obliterated every sign of modelling on the great toe of St. Peter by kissing it with their dusty lips.

St. Peter's is a lesson to us all that mere size, the lavishing of money, the use of costly materials and of the fashionable art of the day, are not enough to render any monument a subject for perennial admiration if the fire of genius be wanting in the artists who erect it and the epoch is wanting in sympathy with grand creative genius. We cannot say, as Plutarch does, of the buildings on the Acropolis at Athens, "As each of them, as soon as finished, had the venerable air of antiquity, so now they are old they have the freshness of modern building. A bloom is suffused over them which preserves the aspect untarnished by time, as if they were animated with a spirit of perpetual youth and unfading excellence."

At the epoch in which St. Peter's was completed, you could not expect from the artist that singleness of purpose nor that love of fame that will force him to devote endless labour in attempting to perfect his ideal; popular applause, wealth, and titles were then enough for him, and these he got. Excellence in the fine arts is the thermometer of a nation's elevation, and when the nation grovels you will never find great pictures, great sculpture, great architecture, and still less great poems. As the poet says, to make anything touch us the artist must feel when

That child's heart within the man's
Begins to move and tremble,

and must seize the moment of inspiration.

All those wonderful tombs, from those of Jacopo della Quercia to those of Desiderio da Settignano and Mino da Fiesole, are exquisite. Of the works of that mighty genius Michelangelo all are striking; but perhaps his fame rather rests on his paintings on the ceiling of the Sistine Chapel than on anything else, though he said to the Pope, "I am not a painter." Architects owe him a grudge, however, for dwarfing the Sistine Chapel by his enormous figures. That helmeted figure of Lorenzo de' Medici in the new sacristy of San Lorenzo at Florence stamps itself indelibly on the mind, and has a fascination about it that no other figure possesses, and was a marked advance in sculpture; while his "Slave" is to me by far the most delightful figure he ever did; but this may not be the verdict of a sculptor. In architecture, the Mausoleum of the Medici, commonly called the Sacristy of San Lorenzo, is stamped with the greatest sublimity of all his architectural works that I have seen, in spite of its solecisms. Of his poems I am no judge, though one must remember that Wordsworth, who translated them, said he could satisfactorily put into English a canto of Ariosto in a week, but found it took him longer to translate satisfactorily one sonnet of Michelangelo's.

Michelangelo was a genius whose mighty mind begot an admiration of his power. He was an indefatigable worker, a man perfectly upright, of simple habits and full of practical kindness to his family, and a patriot when most of the other artists seemed to forget that they had a country, and who worked for nothing on St. Peter's the last seventeen years of his life. But from his youth he had a furious temper and was sarcastic, and from putting Torrigiano in a passion got his nose broken. He was thought to be of a churlish and surly turn. Rafael said he stalked about Rome like the hangman, and his behaviour to Leonardo da Vinci was not polite. He, however, said it was from absorption in his art. I think he was less generally liked in his lifetime than Leonardo da Vinci or than the divine Rafael, though he was almost adored by Vasari and Benvenuto Cellini, but he was looked up to by all the artists as the Great Master. Of all that he left behind him at St. Peter's, except the outline of the drum and dome, there is nothing that delights us who are not sculptors except perhaps his "Pietà."



9, CONDUIT STREET, LONDON, W., 21st Dec. 1901.

CHRONICLE.

Paper by Dr. Murray for the Meeting of 6th Jan.

There being no professional or other questions for discussion at the Business Meeting fixed for the 6th January, the Council have decided to turn it into an Ordinary General Meeting, and Dr. Murray, having been approached on the matter, has very kindly consented to deliver a short discourse on Two Ionic Capitals in the British Museum. One of these capitals is a restoration of an archaic capital from Ephesus, of an entirely new character. The other is an angle capital from the Temple of Wingless Victory at Athens, which was brought here by Lord Elgin, but was only identified a month or two ago. Dr. Murray is having some slides made for the occasion, and an interesting evening may be confidently anticipated. The Meeting will of course be open to non-members, including ladies.

The Proposed New Cathedral in Liverpool.

The following correspondence has passed between the Council of the Institute and the Liverpool Cathedral Committee:—

9, Conduit Street, W.: 20th November 1901.

The Liverpool Cathedral Committee, Church House, Liverpool.

GENTLEMEN,—At a meeting of the Council of the Royal Institute of British Architects, Mr. John Slater, *Vice-President*, in the Chair, we were instructed to submit for your very earnest consideration certain points in connection with the competition for the proposed new Cathedral in Liverpool.

In the first place, the Council of the Royal Institute regret that, a competition for the Liverpool Cathedral having already taken place and a design selected under competent advice, it should have been thought necessary to inaugurate another competition.

The new competition, however, being now instituted, the Council direct us to express their views as follows:—

1. They regret that for such an important building a site has been proposed which does not

possess the advantage of being in a central position, and presents many practical disadvantages.

2. In view of the necessity of securing the confidence of the architectural profession in a competition for a building of national importance, the Council of the Royal Institute strongly advise the Liverpool Cathedral Committee, as a first step, to appoint professional assessors, who should be men of eminence, whose names should be published forthwith, and to whom should be entrusted the preparation of the conditions.

3. They are of opinion that instead of inviting the submission of portfolios of miscellaneous designs and photographs, the Liverpool Cathedral Committee should institute a preliminary sketch competition, open to all architects, for a cathedral designed for the special site selected.

That all such designs should be sent in anonymously.

And that from such designs a limited number should be selected by the assessors, the authors of which should be invited to take part in the final competition.

4. They urge that in the conduct of the two stages of the competition the selection and award made by the assessors should be accepted by the Liverpool Cathedral Committee.—We have the honour to be, Gentlemen, your obedient servants,

ALEXANDER GRAHAM,
Hon. Secretary.

W. J. LOCKE,
Secretary.

The Church House, Liverpool, 3rd December 1901.

The President and Council of the Royal Institute of British Architects.

SIR,—We have the honour to acknowledge receipt of your letter of the 20th ultimo, which has been very carefully considered by the Executive Committee, and we are instructed to thank you for kindly placing before the Committee your views as to the competition for the design of the proposed Cathedral for the Diocese of Liverpool.

Taking the points to which you draw the Committee's attention seriatim, we are desired to say:—

1. In inviting a fresh competition the Committee were guided by the fact that the previous competition was for a cathedral to be erected upon an entirely different site, and moreover the competition took place fifteen years ago.

The site of St. James's Mount was selected by the Bishop's Committee after prolonged consideration, and careful study of all the possible sites—they had the advantage of the professional assistance of Mr. George Bradbury, the Diocesan Surveyor, and they had also before them the exhaustive reports prepared by Mr. Shelmerdine, the City Architect and Surveyor. This selection was afterwards confirmed at a public meeting held at the Town Hall on June 17, under the presi-

dency of the Right Hon. the Earl of Derby, K.G., the Lord Lieutenant; to this decision the Committee adhere.

The Committee have the advantage of local knowledge of the present City, and its probable extension in the future, and of the requirements of the Diocese. St. James's Mount is the largest open space available, it is very commanding, it is central and offers great opportunities for architectural effect, and is the most suitable from its environments as a site for the Liverpool Cathedral.

2. The Committee have endeavoured to follow the lines laid down by the late Mr. Ewan Christian in the original competition, viz. to hold a preliminary competition, and from the drawings submitted in this competition to select a certain number of architects who will be invited to send in designs for the proposed Cathedral.

3. The Committee, in asking for portfolios to be submitted in the first competition, had regard to the probable engagements of leading architects which might prevent their submitting drawings specially prepared for this Cathedral, and they did not limit the competition to portfolios of drawings of executed work, as they felt that there might be architects who had not had the opportunity of doing any ecclesiastical work of importance and yet might be qualified to be included in the final competition.

The Committee had before them the fact that St. George's Hall in this city was designed by Mr. Elmes, a very young, and up to that time an unknown, architect.

The Committee intend to appoint professional advisers to assist them both in the preliminary and final competitions, and in the preparation of the conditions under which the final competition will take place—they have not yet come to any decision as to whom they shall invite to advise them, as it might lead to the exclusion of eminent architects from entering the competition.

1. That while the views of the architectural advisers whom the Committee will appoint will very properly have the greatest weight with the Committee, they feel that they would not be carrying out the great trust placed upon them by the subscribers if they left the decisions both in the first and final competitions absolutely in other hands.

The Committee are very sensible of the national importance of the work entrusted to them, and they hope after this explanation of their views the Council will feel assured that everything possible will be done by the Committee to honourably select the very best design.

We are, yours faithfully,

WILLIAM B. FORWOOD,
Chairman of the Executive Committee.

R. ALFRED HAMPSON,
Secretary.

Special Election to Fellowship.

Under the proviso to By-law 9, the Council at their meeting on the 16th inst. elected the following gentleman to the Fellowship of the Royal Institute—viz.:

HENRY GEORGE LUFF [*Assoc.* 1864], *President of the Devon and Exeter Architectural Society*; of 64, Chapel Street, Devonport.

"A Modern Cathedral"

The following article under the above heading in the last issue of the *Observer*, which has been brought to the notice of the Editor by Sir Lawrence Alma-Tadema, R.A. [*H.F.*], may be of interest to members. Considered in the light of the lay mind protesting against the charge that the general public shows no intelligent regard for architecture, it points an obvious moral. Read in connection with the Liverpool Cathedral controversy, it distinctly adorns a tale.

The site for the Liverpool Cathedral has apparently not yet been chosen, nor yet the style that is asked for as a development of the ancient forms of architecture. In smaller churches a modern style has been devised. There is the red brick Norman Shaw looking building, small, warm in appearance, both outwardly and in its interior. For the larger building that would make a more dignified appearance, the simple Greek architecture would be well adapted, were it not reminiscent of the civic hall, while the Byzantine style would not be sufficiently refined to be well adapted to the spirit that should pervade the Christian Church. The Greek style, in its early purity and simplicity, is less artificial and more likely to be successful than the imitated Gothic, which in the larger and more ambitious buildings brings with it a weary sentiment of misspent labour and expense. The true Gothic cathedral, with its sense of decades of voluntary labour for its construction, with the loving care bestowed on its every detail, its quaintness, variety, and mystery, is more like a human growth, so that it almost seems to breathe, rather than a mechanical construction, and as such can scarcely be repeated under modern conditions. The coldness and severity of the Greek temple in the absence of the warming and bright sun illuminating the white marbles of its exterior is not sufficiently sentimental and sympathetic for these climes. If it could be modernised or naturalised by the advent of colour—brought in by slabs of coloured marbles for the exterior and interior decoration, mosaics of glass and marble, and by stained glass, the chilling effect would be obviated. There are several well veined and red coloured marbles in the Devonshire quarries, and in Connemara, such as are in ordinary use as framework for gratings and for mantelpieces. There is the Mexican onyx, suitable for smaller pilasters, and innumerable Italian marbles varying in value and in beauty. The interior might be further brightened by flowering shrubs and plants throughout the year, these not necessarily costly or so trivial in character as the festival decorations of cut flowers and branches. There might be window-boxes of suitable design like projecting fountains; and iron and bronze work introduced. But the plain and bare form of the Greek temple would be scarcely suitable for a large cathedral, unless indeed it were made as a group of temples in the form of a wheel, round or oval, or in triangular form, with encircling steps, and with a central tower. In this tower might be arranged chambers for quiet meditation, on the walls designs of the process of the organic creation of the world and maps of the

heavens, and telescopes might be a means of abstracting the thoughts from the narrower circle of our world, whilst the human call might be used instead of the mechanical tinkles of the carillon or the too-often dissonant tones of metal bells.

The late Hugh Leonard [H.A.], F.S.A., M.Inst.C.E.

An old and valued friend of the Institute has passed away in Mr. Hugh Leonard, late Chief Engineer to the Government of Bengal, who died on the 15th inst. in his seventy-eighth year.—Mr. Leonard retired from the Indian service and the active exercise of his profession some twenty-five years ago, and took up his residence in London. He became an Hon. Associate of the Institute in 1878, and was a frequent attendant at General Meetings. For the past nine years he had served, by the Council's appointment, on the Science Committee, bringing to their labours a ripened experience and skill which were of no little value to the Committee in their brickwork tests a few years ago. He himself had carried out in Calcutta in the early 'seventies a series of experiments on brickwork and masonry which have had extremely beneficial results to building in that district. A detailed description of them appeared in *Engineering*, vol. xx., and a briefer account was contributed by Mr. Leonard to this JOURNAL [Vol. II. pp. 593-95]. Mr. Leonard had travelled a good deal in China, and the same volume of the JOURNAL contains some interesting notes of his on the Great Wall and the Ming Tombs.—The funeral took place at Hanwell Cemetery on Thursday, a floral wreath being sent as a mark of respect from the Institute.

The late Edmund William Smith [H.A.].

Mr. J. R. Moore-Smith [A.] sends news of the death of his brother, Mr. E. W. Smith, of the Indian Archaeological Survey, which occurred from cholera on the 21st ult., while on service in the Forest of Bahraich, Oudh.—Mr. E. W. Smith, who was elected Hon. Associate of the Institute last January, succeeded Dr. Führer as Archaeological Surveyor for the N.-W. Provinces and Oudh in 1898. For many years previously, however, while Architectural Assistant to the Survey, he had practically controlled the archaeological operations in that part of India, his nominal chief being engaged in epigraphical and antiquarian work. The Annual Progress Reports of the Indian Archaeological Survey show the magnitude of the work of restoration and repair initiated by him, and carried out by the Public Works Department under his directions. They also attest his peculiar fitness for a position of such responsibility. To mention his work in Agra alone during the past three or four years—the Taj, and the four buildings associated with it known as Saheli Burj, the Fatehpuri Mosque, the Agra Fort, and the west wing of the Jahangiri Mahal, have all been

thoroughly repaired or restored. Speaking of the work carried out at the Taj, the Report issued last August states that in all kinds of restorative work Mr. E. W. Smith had "tapped a vein of latent natural talent which has given excellent results. In fact the Department had called into activity a school of artisans expert in this kind of work. Many of them claim to be the descendants of the artificers who worked under the Emperors Akbar and Shahjahan." A specially interesting feature of his work was the restoration of frescoes dating from the Moghul period which were discovered in the Fatehpur Sikri building and also in the Agra Fort and at Sikandra. No attempt was made to restore the whole frescoes, which were of the nature of panels decorated with floral and geometrical ornamentation, but sufficient was restored to give a true idea of the original. The results of his survey of Akbar's capital at Fatehpur Sikri were published in four handsome volumes entitled *The Moghul Architecture of Fatehpur Sikri*. A few months ago Mr. Smith published *The Moghul Colour Decoration of Agra*, a volume dealing principally with the Chini-ka-Rauza, a building possessing an outside coating of rich tiles worked up into numerous beautiful designs, while the interior is ornamented with frescoes. In 1898 Mr. Smith was commissioned by the Indian Government to prepare a portfolio of Indian architectural drawings. These exhibit selected specimens of the Moghul architecture of Fatehpur Sikri, and details of Akbar's Tomb and of the Kanch Mahal at Sikandra. Mr. Smith held also the appointment of Curator of the Government Museum at Lucknow.

REVIEWS.

THE LONDON BUILDING ACTS.

The London Building Act 1894, and the Amendment Act 1898: A Text-book on the Law relating to Building in the Metropolis, for the Use of Architects, Surveyors, Builders, &c. Illustrated with numerous plates. By the late Professor Banister Fletcher. 3rd edition. Revised, with further diagrams and cases, by Banister F. Fletcher, A.R.I.B.A., and H. Phillips Fletcher, A.R.I.B.A., Assoc. M.Inst.C.E., Barrister-at-Law. 80. Lond. 1901. [B. T. Batsford, 94 High Holborn.]

The text-books of the late Professor Banister Fletcher hold such a high place as works of reference that it is incumbent on his successors to see that the standard of excellence which they have reached is at least maintained, if not raised. With the happy combination of legal and architectural qualifications possessed by the late Professor's sons it should not be difficult for them to improve the work which is the subject of this notice.

The London Building Act 1894 consolidated and amended some thirteen Acts of Parliament, which, according to the preamble of the new Act,

were "complicated, and in some respects doubtful." If that were true of the old law, what shall be said of the new? The late Sir John Bridge, whose words have been generally accepted and endorsed, said that "wherever the provisions of the Act were intelligible many were intelligible in two different ways, and capable of two different constructions." It is therefore of importance to all architects practising in the Metropolis, as well as to those who have to administer the Act, that the doubtful points, so far as they have been decided by the Courts, should be clearly and concisely set forth in any revised edition of the Act. Some attempt has been made to give this information in the present edition, but the decisions are so condensed that it is not always possible to gather what was the question at issue and how far the judgment is applicable to other cases. The idea of giving a brief summary of the judicial finding after the section to which it applies is excellent, but it would be an advantage if a place were found at the end of the book for a short outline of the facts and judgment in each case quoted. This would tend to increase the size of a somewhat bulky volume, but it was found practicable twenty years ago in a much smaller volume, and the precedent might be followed with advantage. The work as a whole is so complete and useful, embracing as it does in a compendious form the numerous statutes, by-laws, regulations and rules affecting buildings, streets, paving, house drainage, theatres, factories and workshops, &c., in the Metropolis, that it is difficult to see what can be omitted without serious loss. Upon the whole, perhaps the least useful portions of the work are the Abstract Tables, Nos. 1 to 23, and that part of Appendix I. which sets forth in detail the various forms of notice in use by district surveyors.

With regard to the Abstract, or mutilated text, one or two extracts will perhaps suffice to show how dangerous it is to attempt short cuts in construing an Act of Parliament. The last rule of Table XVI., which purports to give the gist of Section 207, reads: "No alteration (except with consent of Council) to be made unless in conformity with this Act applicable to new buildings." The inference from this is that so long as your new work is in conformity with the Act you may proceed, but this permission is given in Section 209. The point of Section 207, which has been entirely missed, is that you may *not* make an alteration even though you follow implicitly the rules of the Act, so far as your alteration extends, if by reason of such alteration some other part of the building becomes irregular, no matter how remote from the seat of operations. This is new law, and should be carefully borne in mind. Very recently a builder erected a brick wall to separate the passage and staircase leading to the dwelling-rooms on the upper floor of a building from the

business premises on the ground floor, for the purpose of separate rating. The work he did was in itself perfectly regular, but by reason of this partition the wooden floor over the shop became a "party structure" (by definition), and, not being constructed of "brick, stone, or other incombustible materials," did not comply with Section 71 (1) of the Act, and what was regular before the alteration became irregular by reason of the alteration. Therefore the alteration, although regular in itself, became illegal.

Out of seven acts of conversion enumerated in Table XVII., six operations, such as converting a shop into a dwelling-room, are stated to be unlawful except with the consent of the Council. This is a very serious editorial slip. The conditional clause, commencing "In such manner," has been attached to the seventh operation alone instead of to the whole. There is also a printer's error here, the word "constructed" being used for "converted."

In Table VI. the rules (a) and (c) as to timber or woodwork appear to be contradictory: (a) relates to timber built into a wall, whilst (c) refers to woodwork abutting upon a wall. This is not made clear.

In Table XV., rule 2 is meaningless.

Having regard, therefore, to the mistakes which are likely to be caused by the use of these Tables, it would seem wiser to go direct to the text of the Act and let the Tables give place to more useful matter in the form of short reports of leading judicial decisions.

Many High Court cases of great importance have been omitted, presumably because they were given under the old Act, but where they still hold good it is a pity not to have given the references. In the case of *Holland and Hannen v. Wallen*, argued before Mr. Justice Mathew and Mr. Justice Cave (70 L.J. 376, 10 T.L.R. 300), it was held, *inter alia*, that warehouses exceeding 216,000 feet in cubic extent must be subdivided by party walls and not by fireproof floors. No reference is made to this case, although the case of *Crow v. Kearley and Tonge*, which turned entirely upon it and is only a magistrate's case, is quoted.

The case of *L.C.C. v. Davis* (77 L.J. 698) is cited, but no facts or suggestion of the nature of the case are vouchsafed. (The note given should have been appended to the Rowton House case, argued at the same time.) Perhaps, from a public point of view, it might be well not to disclose them; but, on the other hand, a fuller knowledge of the working of the Act with regard to the sections dealing with dwellings "to be inhabited by persons of the working-class" may lead the more speedily to some amendment designed to meet the deliberate evasion of the Act by speculating property owners. The decision of the Divisional Court (Justices Hawkins and Channell) was to the effect that a building could not be held to be a

dwelling-house to be inhabited by persons of the working-class unless it could be shown that it was either (a) "a building that the person erecting intended should be a dwelling-place for people of that class," or (b) "a building structurally adapted for the purpose, *i.e.* adapted to it in its construction." The result of this decision is that a man has only to omit all such provisions as properly ventilated food cupboards, dressers, ranges and sinks (possibly he puts a tap in the w.c. or on the landing outside), and the law supports him, saying his house is not "structurally adapted." But he knows his business only too well. He knows he is supplying the demand of a million people living in a dense belt around the City, the breadwinners of whom average a weekly wage of less than twenty-one shillings. What care that million about "structurally adapted"? To them a room is a floor with four walls and a roof to keep out the rain and temper the biting wind. The range might be useful if there were a joint to be roasted, but when the joint is absent a saucepan answers every purpose. Five shillings a week for a single room and something for the key is a difficulty which is cheerfully faced if only the family can be got in. But the landlord does not let his house out room by room or floor by floor, for if he did he would be guilty of "intention to let," which would bring him within the ruling of the Court. Instead of this, he craftily lets the whole house to one man, and shifts the "intention to let" from himself to his tenant, who is outside the pale of the Building Act, and who he knows must sublet in order to find his weekly rent.

All this it will be said has nothing to do with the Building Act. But if in the nature of things it may be impossible for any building enactment to deal with the question of overcrowding, it is at the same time imperative that it should be made impossible to build dwellings of any description without proper yard spaces at rear, and having, in consequence, internal soil pipes and inspection chambers. The law does not allow this in the case of men honestly endeavouring so to plan and fit their buildings that each tenement, however small, may be a dwelling-place worthy of the name of Home: then why should it protect the man who, having a full knowledge of the use to which his building will be put, neglects to provide the necessary appurtenances for separate occupation?

The index might with advantage be subject to further revision and extension. Take "Habitable Rooms," for example. Rules as to windows and skylights therein are stated to be found on p. 81, but no reference to p. 67 is made, where Section 45 sets forth the window requirements for habitable rooms abutting upon an internal court or area. These rules are indexed under "Courts within a building," but ought also to be found under "Habitable Rooms" and again under the head-

ing "Windows." Under the heading "High Court" the word "Tribunal" has been omitted. "Theatres" are in the index, but have to be sought out.

The new plates showing the working of the air-space sections are very useful, and give a rough idea of the limitations imposed by the 1894 Act. Plate 5, however, fails to point out an important concession which architects in general have been slow to take advantage of, *viz.* that in calculating the height of a building the measurement is taken "in the case of gabled buildings to the base of the gable," and as no restriction is placed on the number or extent of the gables, which may be two stories in height, it is to be regretted that this tacit invitation to beautify the skylines of our streets has not been oftener accepted. How beautiful this feature may become has seldom been more ably demonstrated than in the five gables of the Constitutional Club, harmonious alike in form and colour and attaining their full glory in the glow of a western sun. At the rear also some relief is afforded, and the horizontal skyline may be broken by a dormer or chimney to the extent of one-third of the total width of the building. This is not shown on the diagram.

The plates show a considerable falling off in the quality of the drawing and lettering, giving the impression of undue haste in preparation. The errors in the original plates have been perpetuated, and others allowed to creep in. The words "when less than four feet" in Plate 7 should be omitted from the section, as they are misleading. In Plate 6 chases in party-walls should come under Section 60, leaving the recesses only for Section 54. Chases must be seven feet apart if on the same side of the party-wall, but may nearly adjoin if on opposite sides, which is a weak point in the Act.

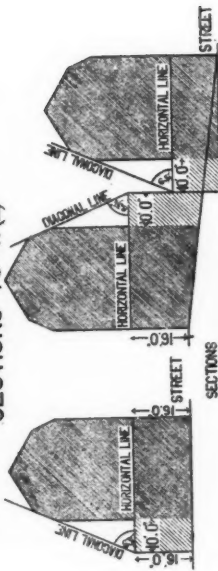
Plates 12 to 23, showing cross sections of dwelling-house and warehouse walls, are very serviceable, but not entirely trustworthy without reference to the text of the schedule. In Plates 14, 15, 16, 20, 21, and 22, the section of the brickwork for walls over 45 feet in length is taken through the piers instead of through the recesses: the concession is therefore lost sight of.

In this connection it is impossible not to refer to one of the curious anomalies of the Act, *viz.* that in the case of warehouse walls over 45 feet in length a wall 41 feet in height has to be three bricks in thickness on the lowest floor throughout its entire length, while a wall 80 feet in height need only be 2½ bricks thick, with ½-brick piers equal in width to a quarter the length of the wall.

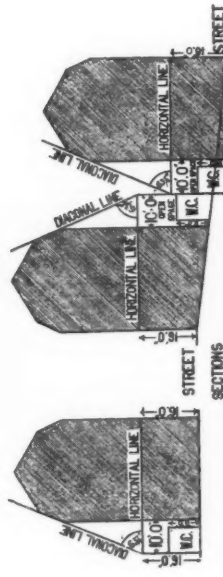
Plate 2, as will be seen from the reproduction [page 95], shows the air space required to be left at the rear of dwelling-houses abutting on new streets and the setting back of the upper stories so as to come within the diagonal line. Looking at the

PLATE 3.

DOMESTIC BUILDINGS ON OLD STREETS
SECTIONS 40 & 41(2)



DOMESTIC BUILDINGS NOT INHABITED BY PERSONS OF THE
WORKING CLASS



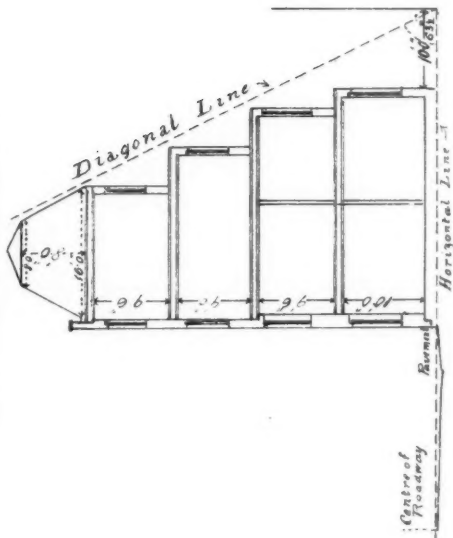
DOMESTIC BUILDINGS INHABITED BY THE WORKING CLASSES



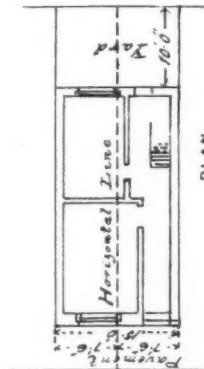
PLANS

PLATE 2.

ILLUSTRATION AS TO SEC 41 BACK YARDS.



SECTION



PLAN

This diagram is in illustration of the angle where Domestic Buildings are erected abutting on Streets laid out after 1st January 1895 & the stringency is relaxed where the Domestic Building abuts on Streets laid out before the commencement of Act by the horizontal line being raised 16 feet above the pavement level.

matter from a public health point of view rather than from the standpoint of the landowner, the air-space rules can only be said to be "stringent" by comparison with the complete liberty which became licence under the old Act. Plate 8 [page 95] illustrates a few examples of the application of the air-space provisions of Section 41 (2) at the rear of dwelling-houses on old streets. These sections show the results of the disastrous concessions which the London County Council had to make in order to secure the passage of their Bill through the House of Commons. Bad as the cases represented undoubtedly are, much worse is possible. In practice basements are added and occupied as living and sleeping rooms in spite of the provisions of the Public Health Act regulating the construction of underground rooms, all of which go by the board because the rooms are never separately occupied as a dwelling, but are always let with one other room above the level of the ground, which is sufficient to secure immunity from the regulations in question.

Messrs. Fletcher are to be congratulated on the production of a very complete work of reference, which should be found on the table of every architect in London.

ARTHUR CROW.

THE GREEK AND ROMAN ORDERS.

Classic Architecture. A Series of ten plates illustrating typical examples of the Grecian and Roman Orders. By Charles F. Mitchell and George A. Mitchell. [B. T. Batsford, 94, High Holborn.]

It is stated in the preface that these plates have been published for students seeking admission to the Royal Academy Schools and to the Royal Institute of British Architects' examinations. The initial arrangement of the plates is good, giving large-scale details of all the main parts, and also a small plan of the building from which the example is taken, on the same page. A short description is also given of the position, dates, &c., of the various temples, which would doubtless give the student an added interest in his work. The drawings have probably suffered somewhat in the process of reproduction, and in many cases the flutings on either side of the column appear unpleasantly black. The authors show a method of obtaining the entasis to the columns, but in very many of the plates the cap and base are connected by a straight line. If a student were to do this it is exceedingly doubtful if he would pass either at the R.I.B.A. or at the R.A. The last two plates show some typical Greek and Roman ornament, drawn in a rather unsympathetic manner. The work is published at a very small sum, but even for the student who is unable to afford to purchase standard works they are usually available at the libraries, or from the shelves of their employers. Stuart and Revett, Spiers, Mauch, and many other books

show the Orders well drawn, and as the student necessarily has to expend a good deal of time on his probationary studies, it is important that he should work from the very best illustrations.

R. STEPHEN AYLING.

LEGAL.

Architect's Commission as Land Agent.

THOMPSON v. TOLHURST.

This case was heard before Mr. Justice Lawrance and a Special Jury in the King's Bench Division on the 5th inst. It was an action to recover commission alleged to be due to the plaintiff as architect, surveyor, and land agent.

Mr. Duke, K.C., and Mr. Arthur Powell appeared for the plaintiff; Mr. Bray, K.C., and Mr. George Wallace for the defendant.

The plaintiff, Mr. J. W. Thompson, said that he was an architect, surveyor, and land agent at Southend, and the defendant, who was a solicitor, was the proprietor of the Warrior Square estate at that place. The defendant's affairs were conducted chiefly by his son, Mr. Bernard Tolhurst, who asked him if he could introduce lessees or purchasers, and said that the usual rate of remuneration would be paid. They agreed that there should be a fixed remuneration of $2\frac{1}{2}$ per cent. for introducing a purchaser. As to leases, it was left to the usual terms, which were one year's rent. The plaintiff disposed of a plot to a Mr. Burdett, and the Hotel Victoria, of which plaintiff was architect, was built on it, and he was paid commission at $2\frac{1}{2}$ per cent. in January 1899. The plaintiff prepared plans for an hotel for another plot, and endeavoured to find a purchaser, and ultimately, through Mr. Harold Greenhalgh, he introduced Mr. F. D. Hayward, who agreed to take a lease for 99 years at £2,000 a year, on the terms of erecting an hotel in accordance with the plans which the plaintiff had prepared. Mr. Hayward on the same day appointed the plaintiff his architect, and the Hotel Métropole was built on the site. The plaintiff had received something under £3,000 as architect's fees for his five years' work. When the plaintiff asked for his commission, as he had to pay a share to Mr. Greenhalgh, the defendant's son said that the appointment as architect was the only remuneration to which he was entitled. A sum of £300,000 had been spent on the building, and the bank that had been financing Mr. Hayward had gone into possession. Mr. Hayward had become bankrupt, and could not now be found.

The defendant and his son, Mr. Bernard Tolhurst, gave evidence for the defence. They said that the arrangement was that the plaintiff was only to be paid for being architect of the building, and was not to have any commission, and in accordance with this they stipulated with Mr. Hayward that the plaintiff was to be appointed architect. As to the commission on the plot sold to Mr. Burdett, the defendant said that he was not liable, but paid it in case people should say he had behaved shabbily.

Witnesses were called on behalf of the plaintiff to prove the existence of a custom that on the taking of land on a building-lease at a ground-rent, the estate agent introducing the person who took the lease was entitled to a commission equal to one year's ground-rent, but they stated that where the ground-rent was a large sum like £2,000, as in the present case, there was generally a special arrangement, and a witness for the defendant said that a quarter of the ground-rent would be reasonable.

In the result the jury found a verdict for the plaintiff for £1,300, and judgment was given accordingly.

